

SITE VISIT

Human Genome At a Glance

From DNA sequences to new research on genetic diseases, details about the human genome are pouring into public databases. This spring, the government's National Center for Biotechnology Information (NCBI) launched a curated Web site, called Human Genome Resources, that can help researchers keep tabs on all these new data.

For starters, the public site has links to key genomic databases and point-and-click paths to detailed maps and markers for all 23 pairs of human chromosomes. And a newly developed resource, LocusLink, provides "an easy starting place for a quick summary of all the top-level information [about a gene]," says Gregory Schuler of NCBI. Type a gene name into LocusLink, and up comes a list of that gene's aliases, its location on the genome, ID numbers, and links to its sequence in GenBank; or link to Medline abstracts and other resources. Another new feature, RefSeq, will help sort out conflicting or divergent GenBank submissions about a particular gene by providing a single sequence selected by a team of experts. Databases of mutations, such as single-nucleotide polymorphisms, will be indexed by these reference sequences, Schuler says.

As of 20 April, LocusLink covered more than 9000 genes and regions, and 419 reference sequences had been pinned down. Another cool feature is color-coded chromosomes that let even high school students track the weekly progress as sequencers scramble to finish the human genome's 3 billion bases by 2003.

HOT PICKS

Culture club. Searching for a certain yeast species or strain of salmonella? Try the United Kingdom National Culture Collection, which has just unveiled a Web database of its trove of 70,000 microorganisms and cell lines, including fungi, algae, and animal cells. www.ukncc.co.uk

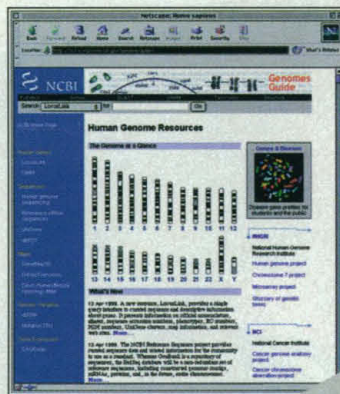
Satellites for kids. Remote imagery might seem a bit complex to explain to kids, but this site pulls it off with satellite images that help tell the story of a bat tooling around Arizona's ecosystems. Aimed at middle school students, the site folds in lessons about the electromagnetic spectrum, ecology, and more. imagers.gsfc.nasa.gov

NET NEWS

Popular Physics?

The low cost of Web publishing may be transforming science by allowing new journals to blossom, but one new publication for speculation on how the world works has physicists shaking their heads.

An e-mail press release heralds the *Journal of Theoretics* as a "new bimonthly peer-reviewed science journal" that will "publish scientifically credible theories ... that are not yet proven" by experiments. The four debut articles range from "a new concept for the origin of the universe" to something called a "light clock" that's "a new method for measuring time."



www.ncbi.nlm.nih.gov/genome/guide

Its scientific bona fides, however, are open to question. Editor James Siepmann, a physician in Oshkosh, Wisconsin, could name no actual scientists who are reviewing or contributing to the journal. "It's very curious," says Bob Park of the American Physical Society, who noted a dearth of equations in the articles. "They're philosophical papers, not physics." Physicist Stephen Walton of California State University, Northridge, commented by e-mail: "A physician is as qualified to publish a theoretical physics journal as I am to remove a gall bladder." Siepmann, however, says that's just the point: "Who is to say that a patent clerk, a CAD designer, or even a family physician may not be gifted with the talents to make revolutionary discoveries of thought?"

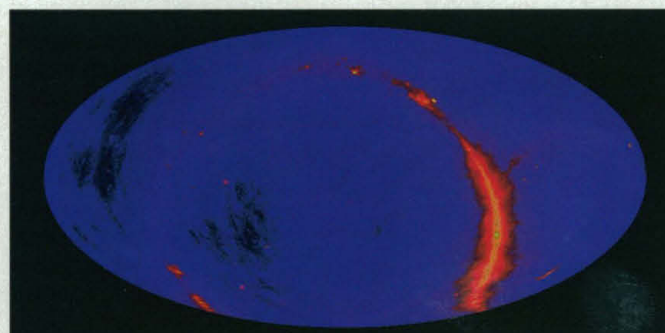
Web publications like Siepmann's pose no threat to the credibility of electronic science journals run by scientists, maintains Paul Ginsparg, who heads the physics e-print server at Los Alamos National Laboratory in New Mexico: "Such things have always existed, independent of the Internet," he says. "They're simply irrelevant, except for the entertainment value."

www.journaloftheoretics.com

COOL IMAGES

Virtual Universe

Behold the entire sky as revealed by radio telescopes (below). The red swirls along the Milky Way (the horseshoe shape) aren't stars but clouds of radio-emitting hydrogen gas. This false-color image, based on an all-sky survey at 408 megahertz in the 1970s, was created by the SkyView Virtual Telescope (skyview.gsfc.nasa.gov). Simply choose the coordinates, and the site will dig into a store of data and spit out an image for that part of the sky in wavelengths ranging from optical to radio to gamma rays. Such views of the sky will only get richer: A host of astronomical surveys around the world are now busy making new maps of the universe's millions of galaxies, stars, and quasars in every wavelength (*Science*, 7 November 1997, p. 1010). For a long list, go to www.cv.nrao.edu/fits/www/yp_survey.html



Science ONLINE

Scientists have thought that long-necked dinosaurs called sauropods nibbled at leaves high in the trees, but a Report on p. 798 based on computer models of fossils finds that these creatures probably browsed close to the ground. Follow the links to more dino-modeling images on Science Online and outside sites. Or, if cell biology is your thing, check out three movies accompanying the Report on p. 765 that help explain how cells use chemical signals to sense direction. www.sciencemag.org

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